Hovsepian v. Apple, Inc.
Doc. 70 Att. 3

EXHIBIT 4

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What is claimed is:

~~1. A transmission system for providing information to~~ remote locations, the transmission system comprising:

library means for storing items;

identification encoding means for retrieving the information for the items from the library means and for assigning a unique identification code to the retrieved information;

conversion means, coupled to the identification encoding means, for placing the retrieved information into a predetermined format as formatted data;

ordering means, coupled to the conversion means, for placing the formatted data into a sequence of addressable data blocks;

compression means, coupled to the ordering means, for compressing the formatted and sequenced data;

compressed data storing means, coupled to the data compression means, for storing as a file the compressed, sequenced data received from the data compression means with the unique identification code assigned by the identification encoding means; and

transmitter means, coupled to the compressed data storing means, for sending at least a portion of a file to one of the remote locations.

2. A transmission system as recited in claim 1, wherein the ~~transmitter means includes:~~

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transmission format means for placing the composite formatted data block onto a communication path.

3. A transmission system as recited in claim 1, wherein the information in the items includes analog signals, and wherein the conversion means further comprises:

converting means, coupled to the identification encoding means, for A/D converting the analog data of the retrieved information into a series of digital data bytes; and

formatting means, coupled to the converting means, for converting the digital data bytes into formatted data with a predetermined format.

4. A transmission system as recited in claim 1, wherein the information in the items includes digital signals, and wherein the conversion means further comprises:

digital input receiver means, coupled to the identification encoding means, for converting the digital data of the retrieved information into predetermined voltage levels; and

formatting means, coupled to the digital input receiver means, for converting the predetermined voltage levels into formatted data with a predetermined format.

5. A transmission system as recited in claim 3, wherein the information in the items includes digital signals, and wherein the conversion means further comprises:

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~~digital input receiver means, coupled to the identification~~ encoding means, for converting the digital data of the retrieved information into predetermined voltage levels; and

formatting means, coupled to the digital input receiver means, for converting the predetermined voltage levels into formatted data with the predetermined format.

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6. A transmission system as recited in claim 2, wherein the compressed data storing means further comprises:

compressed data library means for separately storing composite formatted data blocks for each of the files converted ~~and stored.~~

7. A transmission system as recited in claim 6, further comprising:

system control interface means, coupled to the transmission format means, for generating a ~~visual~~ listing of available items; and

library access interface means, coupled to the transmission format means, for receiving transmission requests to transmit items, and for retrieving formatted data blocks stored in the compressed data library means corresponding to the requests from subscribers.

8. A transmission system as recited in claim 1, further comprising:

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precompression data processing means, coupled to the ordering means, for storing the formatted data blocks.

9. A transmission system as recited in claim 1, wherein the information in the items includes analog audio information, and wherein the conversion means further comprises:

audio converting means, coupled to the identification encoding means, for converting the analog audio signals into streams of digital audio data.

10. A transmission system as recited in one of claims 1 and 9, wherein the information in the items includes analog video information, and wherein the conversion means further comprises:

video converting means, coupled to the identification encoding means, for converting the analog video signals into streams of digital video data.

11. A transmission system as recited in one of claims 1 and 9, wherein the information in the items includes partly encoded information, and wherein the conversion means further comprises:

digital input means, coupled to the identification encoding means, for receiving partial encoded information in the items.

12. A transmission system as recited in claim 1, wherein the data compression means comprises:

means for performing a multi-dimensional analysis of the formatted data for inclusion in a predetermined algorithm; and

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compression processors for running the predetermined algorithm and for compressing the formatted data.

13. A transmission system as recited in claim 1, wherein the compression means comprises:

B means for identifying ~~repeating~~ patterns in the formatted data for inclusion in a predetermined algorithm; and

compression processors for running the predetermined algorithm and for compressing the formatted data.

14. A transmission system as recited in claim 12, wherein the multi-dimensional analysis means includes means for performing the multi-dimensional analysis in the horizontal dimension.

15. A transmission system as recited in claim 12, wherein the multi-dimensional analysis means includes means for performing the multi-dimensional analysis in the vertical dimension.

16. A transmission system as recited in claim 12, wherein the multi-dimensional analysis means includes means for performing the multi-dimensional analysis in the time dimension.

17. A transmission system as recited in claim 12, wherein the multi-dimensional analysis means includes means for performing the multi-dimensional analysis in the zig-zag dimension.

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~~18. A distribution method responsive to requests identifying~~ information to be sent from a transmission system to remote locations, the method comprising the steps of:

storing audio and video information in a compressed data form;

requesting transmission, by a user, of at least a part of the stored compressed data to a remote location selected by the user;

sending at least a portion of the stored compressed information to the remote location;

receiving the sent information at the remote location;

buffering the received information at the remote location; and

playing back the buffered information in real time at a time requested by the user.

19. The distribution method as recited in claim 18, wherein the information in the items includes analog and digital signals, and wherein the step of ~~processing~~ storing further comprises the steps of:

converting analog signals of the information to digital components;

formatting the digital data signals of the information;

ordering the converted analog data and the formatted digital data in a predetermined sequence and;

compressing the ordered information.

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20. The method of claim 18 wherein the step of storing the items includes the substep of storing the items in a plurality of compressed picture and sound information.

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21. The method of claim 18 further comprising the steps of:

storing a list of items available to the user from at least one compressed data library; and

providing the user with the list so that the user may remotely select a particular item for transmission.

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22. A receiving system responsive to a user input identifying a choice of an item stored in a source material library to be played back to the subscriber at a location remote from the source material library, the item containing information to be sent from a transmitter to the receiving system, the receiving system comprising:

transceiver means, for automatically receiving the requested information from the transmitter as compressed formatted data blocks;

receiver format conversion means, coupled to the transceiver means, for converting the compressed formatted data blocks into a format suitable for storage and processing for playback in real time;

storage means, coupled to the receiver format conversion means, for storing the compressed formatted data;

decompressing means, coupled to the receiver format conversion means, for decompressing the compressed formatted information; and

output data conversion means, coupled to the decompressing means, for playing back the decompressed information in real time at a time specified by the user.

26 ~~23~~. A receiving system as recited in claim 25 ~~22~~, further comprising:

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user interface means for translating the input into a request for sending the requested information from the transmitter to the receiving system.

24. A receiving system as recited in claim 22, wherein the output data conversion means includes recording means which controls the playback.

25. A receiving system as recited in claim 22, wherein the storage means stores the formatted information until playback is requested by an operator.

~~26. A receiving system as recited in claim 22, wherein the~~ decompression means further comprises:

video signal decompression means for decompressing video information contained in the compressed formatted information.

27. A receiving system as recited in claim 26, wherein the output data conversion means further comprises:

digital video output means, connected to the video signal decompression means, for outputting a digital video signal contained in the video information; and

analog video output means, connected to the video signal decompression means, for outputting an analog video signal contained in the video information.

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~~28~~. A receiving system as recited in claim 30 ~~27~~, wherein the video output means further comprises:

copy protection means for preventing copying by the user of protected information.

~~29. A receiving system as recited in claim 22, wherein the~~ decompression means further comprises:

audio signal decompression means for decompressing audio information contained in the compressed formatted information.

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30. A receiving system as recited in claim 29, wherein the output data conversion means further comprises:

digital audio output means, connected to the audio signal decompression means, for outputting a digital audio signal contained in the audio information; and

analog audio output means, connected to the audio signal decompression means, for outputting an analog audio signal contained in the audio information.

31. A receiving system as recited in claim 22, wherein the decompression means further comprises:

video signal decompression means for decompressing video information contained in the compressed formatted information; and

audio signal decompression means for decompressing audio information contained in the compressed formatted information.

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~~32~~ 35. A receiving system as recited in claim ~~22~~ 25, wherein the transceiver means receives the information via any one of telephone, ISDN, broadband ISDN, satellite, common carrier, computer channels, cable television systems, MAN, and microwave.

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